

## California Monthly Climate Summary August 2007

### **Weather Highlights**

August returned to the pattern of above mean temperatures and below mean precipitation. According to the Western Region Climate Center's [California Climate Tracker](#), August 2007 was 0.9°F higher than the long-term average temperature of 73.1°F. With a statewide average of 0.22 inches, precipitation for August was only 48.1% of the long term average.

August weather provided new highs, lows and a swath of precipitation across the central part of the state. August started hot and dry with a high pressure system located over southeast Utah dominating the weather. In the middle of the first week of August a pulse of monsoonal moisture moved up from the south providing clouds across the state and showers for the mountains. The second week of August brought more hot weather with temperatures soaring over 100°F in many parts of the state. A deepening trough over the Pacific brought cooler temperatures as well as some gusty winds to the northeast part of the state prompting red-flag warnings. The troughing pattern persisted through most of the week with the Central Valley recording highs only in the 70s. The third week saw a strong high pressure system over Colorado extend across the southern half of the state resulting in a return to more seasonable temperatures. A low pressure system off the Pacific Northwest coast yielded a front that triggered some rain showers across parts of the state. August closed out with more hot temperatures. Remnants of Hurricane Dean made it across Mexico and were pulled into southern California bringing some significant rains to some locations.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 89 temperature records tied or broken and 10 precipitation records tied or broken for the month. On August 5<sup>th</sup> and 6<sup>th</sup> Sacramento recorded new low maximum temperature records. For August 6<sup>th</sup> the 74°F reading was the lowest maximum for the day since 1906 when 77°F was recorded. In a change of pace, on August 30<sup>th</sup>, Sacramento tied the record for high minimum temperature with a reading of 71°F. On August 20<sup>th</sup>, Eureka broke its daily high temperature record by 4 degrees with a recording of 74°F. The previous daily record occurred in 1923. In Southern California, Santa Maria recorded a new precipitation record of 0.01 inches on August 5<sup>th</sup>. On August 20<sup>th</sup>, Santa Maria set a new high temperature record of 82°F. The old record of 81°F was set in 1937. In Escondido on August 26<sup>th</sup>, 1.45 inches of rain fell breaking the old record of 0.74 inches set in 1935. All in all, there were 17 days in July with a record set somewhere in California. It should be noted that this data is preliminary and may not include all records set. For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 109 recorded a maximum temperature above 100°F. For minimum temperatures, 14 stations recorded a minimum temperature below freezing. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC and CIMIS networks is also shown.

Precipitation in August was spotty. The largest amount of precipitation recorded in the CDEC precipitation gages for August 2007 was at the Bodie gage in the North Lahontan region where 1.81 inches of rain fell. This is 270% of the average August rainfall for this

location. Three other sites (Lee Vining, Independence, and Lake Arrowhead) also posted more than one inch of precipitation for the month. One hundred thirty-four stations in the CDEC and CIMIS databases reported zero precipitation for the month. The 8-Station Index for northern California precipitation recorded no precipitation. On average, August would have 0.3 inches of precipitation recorded for the 8-station index. A table of October through August 8-Station Index totals can be found at the end of the summary. With no further rain for the rest of the water year, this year's 8-station precipitation total ranks as the 26<sup>th</sup> driest year in the last 87 years. Note that last year was the 5<sup>th</sup> wettest year. Statewide, the average precipitation for August was 41% of the long-term average based on the California Data Exchange Center (CDEC) gages. Precipitation percentages by region from the CDEC gages are shown in a table at the end of this document.

The Drought Monitor maps which can be found on the National Drought Mitigation Center's (NDMC) website <http://drought.unl.edu/dm/> have not changed for California during the month of July. These maps are largely a reflection of precipitation and soil moisture deficit estimates. The northwest part of the state is depicted as abnormally dry (D0). Moderate drought conditions (D1) are shown for the Sacramento and lower San Joaquin Valleys. The Central Coast, Sierra Nevada and North Lahontan regions are depicted as severe drought (D2). The southern parts of the state are depicted by the NDMC as being in extreme drought (D3). Maps are updated weekly, but conditions in California have remained the same for the past couple of months.

This year's fire season has produced several smaller fires and one huge fire. The Zaca fire in the mountains east of Santa Barbara has burned more than 240,000 acres. This is the second largest fire in terms of acres burned in California since 1932. Other large fires in California in 2007 include the Moonlight fire in Plumas County with almost 65,000 acres burned, the Lick fire in Santa Clara County with 47,760 acres burned, and the Elk Complex fire in Siskiyou County with 17,684 acres burned. From January 1, 2007 through September 8, 2007 there have been 6,104 fires burning 82,410 acres in lands under the California Department of Forestry's control. These values are less than the 5-year average for this time period. Further information on fires in California can be found at [http://cdfdata.fire.ca.gov/incidents/incidents\\_current](http://cdfdata.fire.ca.gov/incidents/incidents_current).

Water supply information for California can be found at [http://cdec.water.ca.gov/water\\_supply.html](http://cdec.water.ca.gov/water_supply.html). This year's below average snowpack led to April through July runoff ranging from 80% of average on the McCloud to 21% of average on the Tule. On the east side of the Sierra, the East Fork of the Walker River recorded only 19% of its historical April through July runoff. A table of observed April-July runoff for 2007 is included at the bottom of this summary. For the Sacramento River system the year has been classified as dry. For the San Joaquin, it has been classified as critical. A historical listing of water year categories for both basins can be found at <http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST>.

### **ENSO Conditions and Long-Range Outlooks**

The El Niño/Southern Oscillation (ENSO) is being classified as a La Niña pattern with conditions intensifying over the next couple of months. Equatorial sea surface temperature anomalies for the eastern tropical Pacific are running between -0.5° C and -2.0° C. Dynamical models forecast a stronger episode than statistical models. More information on the topic can be found at the Climate Prediction Center's web site:

[http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/). Updates are posted weekly. Current climate indicators including ENSO conditions indicate a warmer than average September through November period for most of California. Precipitation forecasts show below normal totals for the next three months for the northern two-thirds of the state and equal chance of above, near, or below normal precipitation for the rest of the state. Long-range outlook plots of precipitation and temperature can be found at: <http://www.wrcc.dri.edu/longrang/>. General weather information of interest can be found at <http://www.noaawatch.gov/>. For anomaly information please see [http://www.wrcc.dri.edu/anom/cal\\_anom.html](http://www.wrcc.dri.edu/anom/cal_anom.html).

### **Agricultural Data**

August was another harvest month for many crops. Safflower harvest continued along with sugar beets, corn silage, and grains. Alfalfa was in the 6<sup>th</sup> cutting. Sweet potato harvest started in Stanislaus County. Table, wine, and juice grape harvests are continuing with good yields reported in the wine grapes. Raisin growers were preparing for harvest in some areas. Central Valley peaches, plums, nectarines, and pluots continued to be harvested along with apples, figs, pears, quinces, and pomegranates. Vegetable crops were harvested across the state. Good yields are occurring in the almond harvest. Pistachios and olives are sizing nicely. Strawberry planting was completed in Merced County. Ground preparation for fall carrot planting continued. Growers are expecting a good navel orange crop this year although fruit size is the lowest since the 2002-2003 crop year. Dry conditions and high hay prices have caused hindered cattle stocking operations for the coming winter pasture season. Early fall calving of beef cows continued. Beef cows in foothill pastures are receiving supplemental feed and nutrients. Warm temperatures continued to cause lower milk production at dairies. Stock sheep and goats were grazing in harvested fields. Honey bees were in melon and vine seed fields. For further crop information see <http://www.nass.usda.gov/index.asp>.

### **Other Climate Summaries**

[California Climate Tracker](#) (new product of Western Region Climate Center)

[Golden Gate Weather Service Climate Summary](#)

[NOAA Monthly State of the Climate Report](#)

### **Statewide Extremes (CDEC)**

High Temperature – 117° F (Mojave River Sink, South Lahontan; Squaw Lake and Cahuilla, Colorado River Desert)

Low Temperature - 21° F (Casa Vieja Meadows, Tulare Basin)

High Precipitation – 1.81 inches (Bodie, North Lahontan)

Low Precipitation – 0 inches (51 stations)

### **Statewide Extremes (CIMIS)**

High Temperature – 108° F (UC San Luis, Imperial County)

Low Temperature - 41° F (Alturas, Modoc County)

High Precipitation – 0.88 inches (Escondido SCV, San Diego County)

Low Precipitation – 0 inches (83 stations)

### Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basins Reporting			Stations Reporting			Percent of Historic Average	
		Basins	Aug	Oct-Aug	Stations	Aug	Oct-Aug	Aug	Oct-Aug
NORTH COAST	0.27	5	3	2	19	8	6	14.9%	84%
SAN FRANCISCO BAY	0.03	2	2	2	6	5	4	0%	74%
CENTRAL COAST	0.06	3	3	3	11	7	5	70.1%	51%
SOUTH COAST	0.06	3	3	3	15	12	10	20.3%	27%
SACRAMENTO RIVER	0.26	5	5	5	43	16	15	9%	63%
SAN JOAQUIN RIVER	0.12	6	5	5	25	15	13	79.1%	61%
TULARE LAKE	0.07	5	2	3	28	8	10	118.8%	54%
NORTH LAHONTAN	0.04	3	3	3	14	9	7	132.5%	62%
SOUTH LAHONTAN	0.06	3	3	3	15	8	8	92.8%	38%
COLORADO RIVER	0.03	1	1	1	6	4	3	10.9%	9%
STATEWIDE WEIGHTED AVERAGE	1.00	36	30	30	182	92	81	40.8%	62.1%

### Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	35	44.9	66.7	93.2
SF Bay	20	52.2	68.3	90.3
Central Coast	32	51.7	65.9	84.0
South Coast	65	55.9	75.6	98.8
Sacramento	90	48.5	71.4	94.4
San Joaquin	73	50.7	71.2	91.5
Tulare Lake	18	43.6	64.9	85.6
North Lahontan	28	41.4	62.2	82.4
South Lahontan	22	50.3	71.2	90.4
Colorado River Desert	22	74.1	91.2	106.6
Statewide Weighted Average	405	48.8	69.7	92.3

### Northern California 8-Station Index October through June Values

Month	Precipitation (inches)	% of Average
October	0.5	17
November	5.7	90
December	8.5	101
January	1.4	16
February	13.6	170
March	1.6	23
April	3.1	79
May	1.2	55
June	0.4	40
July	0.5	250
August	0	0

### 2007 April-July Runoff in Thousand Acre-Feet

Basin	Observed Flow	% Avg
Trinity	286	44%
Sac/Delta	112	38%
McCloud	314	80%
Pit	685	64%
Shasta	1078	59%
Bend	1311	53%
Feather	739	41%
Yuba	453	45%
American	516	42%
Cosumnes	45	36%
Mokelumne	208	45%
Stanislaus	292	42%
Tuolumne	503	41%
Merced	212	34%
San Joaquin	431	34%
Kings	436	36%
Kaweah	99	35%
Tule	13	21%
Kern	125	27%
Truckee	113	43%
W. Carson	20	37%
E. Carson	73	39%
W. Walker	64	42%
E. Walker	12	19%